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TITLE: Methods for synthesizing heat shock protein complexes

CLAIMS:

1. A method for synthesizing heat shock protein complexes comprising the steps of:

adding a heat shock protein to a denatured protein matrix to bind the heat shock protein to the matrix; and

adding a complexing solution comprising a peptide to elute a heat shock protein-peptide complex.

2. The method of claim 1, wherein said heat shock protein added to the matrix is complexed with ADP.

3. The method of claim 2, wherein said eluted heat shock protein-peptide complex comprises an ADP-heat shock protein peptide complex.

8. The method of claim 1, wherein said heat shock protein is added to the matrix as part of a heat shock protein-containing solution which includes ATP and the method further comprises the step of converting ATP in the heat shock protein-containing solution to ADP.

10. The method of claim 1 wherein the heat shock protein is selected from the group consisting of: hsp60, hsp65, rubisco binding protein and TCP-1 from eukaryotes; and GroEL/GroES, Mif4, TCPalpha and TCPbeta from yeast.

11. The method of claim 1 wherein the heat shock protein is selected from the group consisting of: hsp104, hsp105 and hsp110.

12. The method of claim 1 wherein the heat shock protein is selected from the group consisting of: DnaK proteins from prokaryotes; Ssa, Ssb, and Ssc from yeast; and hsp70, Grp75 and Grp78(Bip) from eukaryotes.

13. The method of claim 1 wherein the heat shock protein comprises one of the group consisting of: hsp90, gp96 and grp94.

17. The method of claim 1 wherein the complexing solution comprises a cell lysate.

18. An apparatus for synthesizing heat shock protein-peptide complexes comprising a heat shock protein bound to a denatured protein matrix, said heat shock protein being complexed with ADP.

20. The apparatus of claim 18 wherein the heat shock protein is selected from the group consisting of: hsp60, hsp65, rubisco binding protein and TCP-1 from eukaryotes; and GroEL/GroES, Mif4, TCPalpha and TCPbeta from yeast.

21. The apparatus of claim 18 wherein the heat shock protein is selected from the group consisting of: hsp104, hsp105 and hsp110.

22. The apparatus of claim 18 wherein the heat shock protein is selected from the group consisting of: DnaK proteins from prokaryotes; Ssa, Ssb, and Ssc from yeast; and hsp70, Grp75 and Grp78(Bip) from eukaryotes.

23. The apparatus of claim 18 wherein the heat shock protein is selected from the group consisting of; hsp90, gp96 and grp94.